

A LIST OF THE LAND AND FRESH-WATER MOLLUSCA COLLECTED
BY DR. J. W. GREGORY IN EAST AFRICA DURING HIS EX-
PEDITION TO MOUNT KENIA, WITH DESCRIPTIONS OF A FEW
NEW SPECIES.

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THE collection of land and fresh-water Mollusca obtained by Dr. Gregory, although comparatively small, contains a few new and other interesting species. Dr. Hildebrandt, the German traveller, who previously visited the Ukamba country, also brought home zoological collections, and consequently in a certain measure forestalled the results of Dr. Gregory's efforts. Dr. Hildebrandt's collections were enumerated and described by Prof. E. von Martens in the *Monatsb. Akad. Wissen. Berlin*, 1878, pp. 288-298.

1. DENDROLIMAX, sp.

Hab.—Papyrus swamp, north of Rangatan Ndari.

A single specimen only was obtained. It is about 60 mm. in length, of a dirty grey buff colour, mottled with black along the sides of the body and upon the shield. The dorsal keel is wavy through contraction in alcohol, and is somewhat caudate above the enormous terminal pore. The shell is ovate, thickened at the terminal exposed nucleus, and has a length of 11 mm., and is 8 mm. in width.

2. VITRINA BARINGOENSIS, n sp. Figs. 2 and 3.

Testa depressa, pellucida, nitida, virenti cornea, lineis incrementi sculpta; spira planiuscula, apice parum elato; anfractus vix tres, rapide crescentes, convexiusculi, ad suturam concave marginati, ultimus magnus; apertura rotunde lunata, magna; peristoma undique tenue. Diam. maj. 11·7, min. 9 mm.; alt. 7 mm; apertura 6·7 alta, 8 mm lata.

Hab.—Baringo and lower forest zone, Kenia.

The discrimination of species of this genus is in many cases extremely difficult, owing to the fact that, with the exception of slight variations in form, the shells present scarcely any very decided characters.

The present species¹ very closely resembles *V. borbonica*, Morelet, in form, but may be separable on account of a somewhat different nucleus and more marked lines of growth, which, here and there, are almost sub plicate.

¹ Temporarily placed in *Vitrina*; possibly when the animal is known it will prove to belong to *Africarium* or some other allied group.

The specimens from Kenia are a trifle more depressed than those from Baringo, and the aperture appears to be a trifle longer.

3. *ZINGIS GREGORII*, n.sp. Fig. 4.

Testa globosa, anguste perforata, tennis, sub-pellucida, pallide vel fusco-cornea, supra peripheriam zona rufa vel pallida cincta, epidermide tenuissima induta; spira convexe conoidea, ad apicem sub-acuminata; anfractus 6, convexi, sublente crescentes, lincis incrementi obliquis tenuibus sculpti, ultimus magnus, inflatus, antice paulo descendens; apertura leviter obliqua, late lunata; peristoma tenue, simplex, margine columellari ad insertionem breviter expanso, reflexo, lilaceo, umbilicum angustissimum semiobtegente. Diam. maj. 16, min. 13 mm.; alt. 13 mm.; apertura 8 mm. longa et lata.

Hab.—Lowest forest zone, Kenia.

There are three styles of colouration among the specimens of this species. Some are uniformly brownish horn colour, a little paler beneath the suture, and in the umbilical region. Others have a similar ground tint, but are ornamented with a pale narrow zone a little above the periphery, and, finally, in other examples this pale band is replaced by one of a dark red tint.

4. *TROCHONANINA MOZAMBICENSIS*, Pfeiffer.

Hab.—Sabaki Valley, west of Lugard Falls; Kibwezi; shores of Lake Elmeteita; Alngaria.

This species varies so much, both in form and sculpture, that it is difficult to recognise the extreme forms as belonging to one and the same species. A single specimen from the Sabaki Valley has very strong sculpture on the upper surface, coarser than in the type, and a well-marked peripheral keel. The two examples from Kibwezi are much more finely sculptured, have less convex whorls, and a less pronounced keel. Finally the specimens from Lake Elmeteita and Alngaria are still more finely striated above, but as acutely carinate as the very strongly sculptured form from Sabaki.

5. *PELLA*, sp.

Hab.—Guaso Laschau and Alngaria.

Three specimens, two immature and one apparently adult, but damaged and repaired, appear to belong to an undescribed species.

6. *BULIMINUS (RACHIS) RHODOTENIA*, Martens.

B. (Rachis) rhodotania, Martens, Von der Decken's Reisen in Ost-Afrika, vol. iii. part 1, p. 59, pl. ii. fig. 2; id. Monatsb. Akad. Wissensch. Berlin, 1878, pl. ii. fig. 7.

Hab.—On acacia trees in the Sabaki Valley, east and west of the Lugard Falls; also summit of Mt. Mbololo (Gregory).

Dr. Gregory found this species very abundant in the above-mentioned region. As described by Dr. Von Martens it is remarkably variable in colour, and only a series of coloured figures would properly demonstrate this variation.

The rose-coloured zone in the umbilical region is constant in all the examples examined, but the rosy-band below the suture, present in all

the specimens seen by Von Martens, is sometimes entirely wanting, or is replaced by one of a bright orange tint.

7. *LIMICOLARIA FLAMMEA* (Müller).

Hab.—Guaso Narok, Alngaria and Leikipia; also Njenips Indogo, near Lake Baringo.

Two specimens from the two first of these localities probably belong to this variable shell, which ranges westward to the Gulf of Guinea. It is recorded from the Ukamba region by Von Martens. The single example from Njenips Indogo belongs to the variety *dimidiata*, Martens, from the Kilima Njaro district. (Conch. Mitth. iii. pl. xliii. figs. 6-7.)

8. *ACHATINA FULVA*, Bruguière.

Reeve, Con. Icon. fig. 10.

Hab.—Near Mkonumbi, Witu, on sandy steppes (Gregory); E. Africa (Rvc.).

The two specimens brought from Mkonumbi are not quite adult, and consequently rather thin. The upper whorls are coloured like the shell depicted by Reeve, but the last is of a rich chestnut tint.

9. *SUBULINA PAUCISPIRA*, Martens.

Sitz. Ber. naturf. Freund. Berlin, 1892, p. 177.

Hab.—Eldoma Ravine, south of Lake Baringo (Bishop Tucker); Karewia, at the west foot of the Runsoro Mountains and in the Ituri district (Martens).

The specimens from the Eldoma Ravine given to Dr. Gregory by Bishop Tucker, agree exactly with examples of this species presented to the British Museum by Prof. E. von Martens from the original locality, Karewia, where they were collected by Dr. Stohlman.

10. *STREPTAXIS KIBWEZIENSIS*, n.sp. Fig. 1.

Testa oblique ovata, perforata, tenuis, subpellucido-albida, epidermide tenui lutescente induta, nitida, oblique costulata (costulis tenuibus, obliquis, arcuatis, confertis, ad suturam erectis, supra latus ventrale anfr. ultimi evanidis) inter costulas microscopicè spiraliter striata; anfractus 6 convexiusculi, superiores 2-3 lævigati, ultimus oblique valde devians, antice costulatus, latere ventrali polito, subplanato, prope labrum subascendens; umbilicus medioeriter angustus, callo circumscriptus; apertura obliqua, albida; peristoma leviter incrassatum, ad columellam sublata reflexum, inferne medioeriter effusum, margine externo perobliquo, in medio valde excurvato, superne ad insertionem haud profunde sinuato. Longit. 16 mm.; diam. 11.5 mm.; apertura 7 longa, 6.5 mm. lata.

Hab.—Kibwezi.

From its form this species might be regarded as a dwarfed specimen of *S. Craveni*, Smith. It consists of one whorl less, and is differently sculptured. *Gonaxis Bloyeti*, Bourguignat, is also very similar in form. It is not, however, identical in this respect; the outer lip is not sinuated and much straighter, and the body-whorl is smoother; the peculiar circumscription of the umbilicus by a callus is remarkable.

11. *ENNEA* (EDENTULINA) *OBESA*, Taylor.

Buliminius obesa (Gibbons), Taylor, Quart. Journ. Conch. vol. i. p. 255, pl. ii. fig. 3 (1877).

Ennea obesa (Gibbons), Smith, P.Z.S., 1881, p. 281.

Ennea zanguibarica, Morelet, Journ. de Conch. 1889, p. 10, pl. i. figs. 7-7a.

Ennea bulimiformis, Grandidier, Bull. Soc. Mal. France, vol. iv. p. 188 (1887).

Edentulina Grandidieri, Bourguignat, Moll. Afrique équator, p. 142 (1889).

Hab.—Bawri Island, Zanzibar (Gibbons); near Lake Nyassa and between it and Dar es Salaam (Smith); Usagara (Grandidier and Bourguignat); Witu and Mangea (Gregory).

After careful consideration I have failed to discover any real specific differences in the above so-called species.

12. *CYCLOSTOMA ANCEPS*, Martens.

Monatsb. Akad. Wissensch. Berlin, 1878, p. 288, pl. i. fig. 4.

Hab.—Sabaki Valley, east of Makangeni and Kurawa, Kilifi River (Gregory); Taita (Martens).

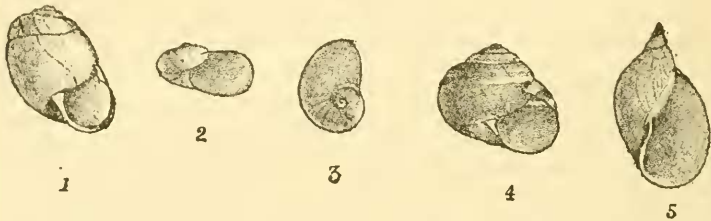


FIG. 1. *Streptaxis Kibweziensis*.
,, 2, 3. *Vitrina Baringoensis*.

FIG. 4. *Zingis Gregorii*.
,, 5. *Limnaea Elmteitensis*.

13. *CYCLOSTOMA LETOURNEUXI* (Bourguignat).

Rochebrunia Letourneuxi, Bourg. Bull. Soc. Mal. France, vol. iv. p. 270 (1887).

Hab.—Kau, near Witu.

This species has not yet been figured, and consequently I am not quite sure of the identification of the specimen from Kau with it. Similar specimens collected at Zanzibar were presented to the British Museum by Mr. A. E. Craven. They differ from *C. zanguibaricum*, Petit (= *C. parvispira*, Pfr.), in being spirally ridged, in having a longer spire, a smaller body-whorl, and only the one colour-band just below the periphery. Bourguignat's specimen (possibly somewhat young) was 10 mm. in height and width. The specimens in the Museum exceed these dimensions by about 2 mm. *C. zanguibaricum*, as figured by Pfeiffer,¹ appears to be quite distinct from Petit's species (Journ. de Conch. vol. i. pl. iii. fig. 5) and bears a considerable resemblance to the present form.

¹ Conch. Cab. Cyclostomacea, pl. xxxix. figs. 24, 25.

The shell figured by Reeve as "*C. Zanzibarium*, Petit" (Con. Icon. pl. xiv. f. 87), which is still preserved in Cuming's collection, is a young specimen of a larger species, probably from Madagascar. This is evident from the large size of the nuclear whorls.

14. *MELANIA TUBERCULATA* (Müller).

Hab.—Kibwezi.

15. *AMPULLARIA SPECIOSA*, Philippi.

Hab.—Lake Dumi, Tana; Ngalana, Witu.

A common well-known East African form.

16. *LANISTES CARINATUS* (Olivier).

Hab.—Witu, swamps of the Kilifi River, and Sabaki Valley, east and west of Makangeni.

This Nilotic species ranges from Egypt to the Victoria Nyanza. It has also been recorded from Abyssinia (Philippi) and the Tana River (Martens).

17. *LANISTES*, sp.

Hab.—Salt marshes of the Ozi River, Kau.

A single specimen from this locality does not agree exactly with any of the numerous known forms. It is of a dark olive-brown colour and looks like a cross between *L. oum* and *L. olivaceus*. It seems advisable to await further specimens in order to see if the peculiarities of the present example are maintained in others.

18. *CLEOPATRA FERRUGINEA* (Lea).

Hab.—Swamps of the Kilifi River (Gregory); Zanzibar, Uмба, etc.

The *Paludomus Africana*, Martens, from Finboni appears to be identical with this species.

19. *LIMNÆA ELMETEITENSIS*, n.sp. Fig. 5.

Testa ovata, superne acuminata, tenuis, cornea, incrementi lineis striata, malleata, striis spiralibus nonnullis sculpta; spira acuta; anfractus 5, celeriter crescentes, sutura obliqua sejuncti, convexiuseculi, ultimus magnus; apertura inverse auriformis, longit. totius $\frac{2}{3}$ paulo superans; columella leviter incrassata, reflexa, rimam angustam umbilicalem formans, oblique contorta; labrum tenuissimum, in medio prominens, arcuatum. Longit. 23, diam. maj. 13 mm. Apertura 16 longa, 9 mm. lata.

Hab.—Lake Elmeteita and Lake Baringo.

This species appears to be distinguishable from all the other African forms. It belongs to M. Bourguignat's group *stagnaliana*, which includes those species that approximate the common *L. stagnalis* of Europe in general appearance. In young and half-grown specimens very little malleation is observable, and it is only upon the body-whorl of mature shells that this feature is strongly marked.

20. *PHYSA*, sp.

Hab.—Lake Elmeteita.

Only a single dead specimen was obtained.

21. *MUTELA PETERSI*, Martens?

Hab.—Lake Dumi, Tana River, and swamp east of Makangeni, Sabaki Valley.

The few specimens from the above localities possibly belong to this

species. It appears to be variable in form and colour, no two localities producing exactly similar forms.

22. *MUTELA*, sp.

Hab.—Swamps of the Kilifi River, and Lake Koncholoro, Tana Valley.

Two dead shells from these localities differ from *M. Petersi* in their narrower, more elongate form. They appear to belong to a distinct species, but it seems advisable, considering the variability of fresh-water shells, to await further specimens before definitely describing them as new.
